



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/810,659

03/29/2004

Soon-Sung Yoo

8733.341.10-US

1134

30827 7590 05/04/2007  
MCKENNA LONG & ALDRIDGE LLP  
1900 K STREET, NW  
WASHINGTON, DC 20006

EXAMINER

KIM, RICHARD H

ART UNIT

PAPER NUMBER

2871

MAIL DATE

DELIVERY MODE

05/04/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/810,659

Applicant(s)

YOO ET AL.

Examiner

Richard H. Kim

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/22/07 has been entered.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 19 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Ono et al. (US 6,762,802 B2) in view of Suzuki et al. (US 5,844,255).

Ono et al. discloses a device comprising a substrate (Fig. 14, ref. SUB 1); a gate line (GL(g1)) on the substrate; a first insulating layer (GI) on the gate line and the substrate; a semiconductor layer (AS) on the first insulating layer and over a portion of the gate line; a data line (Fig. 10, ref. DL) over the first insulating layer and that crosses the gate line, the data line including a protruding portion that projects in a direction of the semiconductor layer and that

Art Unit: 2871

forms a source electrode (SD1); wherein the data line further includes a data pad (DTM) a drain electrode (SD2) spaced apart from the source electrode and extending into a rectangular region partially defined by the gate and data lines (Fig. 10, ref. SD1, GL, DL); a passivation layer (PSV) on the drain electrode, the passivation layer having a drain contact hole (Fig. 14, ref. CN) that exposes the drain electrode; and a pixel electrode (PX(ITO1)) formed over the passivation layer, the pixel electrode electrically connecting to the drain electrode via the drain contact hole, wherein the pixel electrode extends over a portion of the gate line so as to form a storage capacitor (CNS) comprised of a capacitor electrode extending from the pixel electrode (Fig. 14, ref. PX(ITO1)), the gate line (GL), and the first insulating layer (GI) therebetween, wherein the storage capacitor further includes a short-preventing part (PSV, AS) disposed between the pixel electrode and the gate line, wherein the short-preventing part has a stepped portion that overlaps a stepped end portion of the gate line. However, Ono et al. does not disclose that the end portion of the semiconductor layer under the data line is substantially a same width as an end portion of the date line.

Suzuki et al. discloses a device wherein the end portion of the semiconductor under the data line is substantially the same width as an end portion of the data line (col. 2, lines 60-65).

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the end portion of the semiconductor under the data line is substantially the same width as an end portion of the data line since one would be motivated to limit an increase in power consumption (col. 14, lines 65-67).

Referring to claim 20, Ono et al. further discloses the device wherein the short-preventing part includes the semiconductor layer and the passivation layer (Fig. 14, ref. AS, PSV).

***Allowable Subject Matter***

3. Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record, taken alone or in combination, fails to teach or disclose the array substrate of claim 20, wherein the short-preventing part further includes an ohmic contact layer, and a conducting material between the semiconductor layer and the passivation layer.

***Response to Arguments***

5. Applicant's arguments with respect to claims 19-21 have been considered but are moot in view of the new ground(s) of rejection.


Art Unit: 2871

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard H. Kim whose telephone number is (571)272-2294. The examiner can normally be reached on 9:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Richard H Kim  
Examiner  
Art Unit 2871